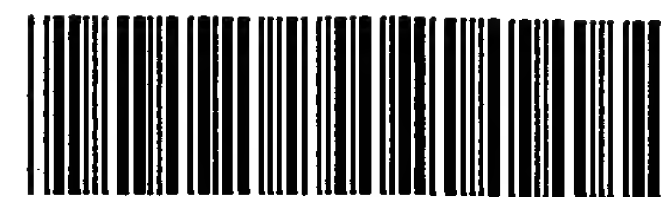


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/3/2/S96F
Source: IFW/C
Date Processed by STIC: 1-4-05

ENTERED



IFW16

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/312,596F

DATE: 01/04/2005

TIME: 13:26:37

Input Set : A:\593601.txt

Output Set: N:\CRF4\01042005\I312596F.raw

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3 <110> APPLICANT: Role, Lorna W.
4       Talmage, David
5       Bao, Jianxin
7 <120> TITLE OF INVENTION: A-FORM OF CYTOPLASMIC DOMAIN OF nARIA (CRD-NEUREGULIN
8       AND USES THEREOF
10 <130> FILE REFERENCE: 0575/59360
12 <140> CURRENT APPLICATION NUMBER: 09/312,596F
13 <141> CURRENT FILING DATE: 1999-05-14
15 <160> NUMBER OF SEQ ID NOS: 5
17 <170> SOFTWARE: PatentIn Ver. 2.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 3212
21 <212> TYPE: DNA
22 <213> ORGANISM: CHICKEN nARIA
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27 aaggtgagag tcttgctttt cgctctgggc tattggttca cttaatccgg tcaatttggt 180
28 cgctgctcgt ggttgtcttt ctccccgcc tcttcccccc tgttttgttt tgtttcgctt 240
29 gctttcgggg ggacgctcct tccctcagtc agaagagctg gaattgcttg agaggcgtat 300
30 aaggaattat aaaagtggcc aggaaacacg agcgcagtga ctgcagagct gcccttggct 360
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32 cgtgcgttcc tcttctccca gtctcgatga tggtgctgtt tcggacctct cgctgactcc 480
33 tgccctgtga tttttgctga gcgctgtgac tgttactccg tctctttctg tctgtgtttc 540
34 acagtaattg actgtgatag agttaaggcc ttttggaggt gagctgtgtc acagctgatg 600
35 cttaaacatg tctgaagtag gcaccgagac tttccccage ccctcggctc agctgagccc 660
36 tgatgcatcc cttggcgggc tcccggtga ggagaacatg ccggggggcc acagagagga 720
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40 gtatgactct cctacacacc ttgaccctgg gaggatagga caagaccaa ggagcactgt 960
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PATENT APPLICATION: US/09/312,596F

TIME: 13:26:37

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Output Set: N:\CRF4\01042005\I312596F.raw

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54 gttttccaca agccactaca cctcaacaac tcatcactcc atgacagtca cccagacgcc 1800
55 tagccacagc tggagtaatg gccataccga aagcattctc tccgaaagcc actccgtgct 1860
56 cgtcagctcc tcagtggaga atagcaggca caccagccca acagggccac gaggccgcct 1920
57 caatggcatt ggtgggcca ggaaggcaa cagcttcctc cggcatgcaa gagagacccc 1980
58 tgactcctac cgagactctc ctcacagtga aaggtatgtc tcagctatga ccacaccagc 2040
59 tcgcatgtca cccgttgatt tccacactcc aacttctccc aagtcccctc catctgaaat 2100
60 gtcaccacca gtttccagct tgaccatctc catcccttcg gtggcgggtga gtccctttat 2160
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62 ccaccttcag caattcaact ccttcacaaa caatcccacc catgagagca acagtctgcc 2280
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83 <212> TYPE: PRT

84 <213> ORGANISM: CHICKEN nARIA

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87 <221> NAME/KEY: UNSURE

88 <222> LOCATION: (32)

89 <223> OTHER INFORMATION: Wherein Xaa = unclear results

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92 <221> NAME/KEY: UNSURE

93 <222> LOCATION: (42)

94 <223> OTHER INFORMATION: Wherein Xaa = unclear results

96 <220> FEATURE:

97 <221> NAME/KEY: UNSURE

98 <222> LOCATION: (113)

99 <223> OTHER INFORMATION: Wherein Xaa = unclear results

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108 <222> LOCATION: (182)

RAW SEQUENCE LISTING

DATE: 01/04/2005

PATENT APPLICATION: US/09/312,596F

TIME: 13:26:37

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Output Set: N:\CRF4\01042005\I312596F.raw

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 141 20 25 30
 143 Ala Asp Thr Ser Leu Arg Cys Ser Arg Xaa Glu Ser Cys Leu Ser Leu
 144 35 40 45
 146 Trp Ala Ile Gly Ser Leu Asn Pro Val Asn Leu Phe Ala Ala Arg Gly
 147 50 55 60
 149 Cys Leu Ser Pro Arg Pro Pro Ser Pro Cys Phe Val Leu Phe Arg Leu
 150 65 70 75 80
 152 Leu Ser Gly Gly Arg Ser Phe Pro Gln Ser Glu Glu Leu Glu Leu Leu
 153 85 90 95
 155 Glu Arg Arg Ile Arg Asn Tyr Lys Ser Gly Gln Glu Thr Arg Ala Gln
 156 100 105 110
 158 Xaa Leu Gln Ser Cys Pro Trp Leu Arg Gln Gly Ser Val Ser Gly Arg
 159 115 120 125
 161 Gly Leu Gly Gln Gly Ala Gly Gly Leu Leu Phe Pro Val Arg Ser Ser
 162 130 135 140
 164 Ser Pro Ser Ser Asp Asp Val Ala Val Ser Asp Leu Ser Leu Thr Pro
 165 145 150 155 160
 167 Ala Leu Xaa Phe Leu Leu Ser Ala Val Thr Val Thr Pro Ser Leu Ser
 168 165 170 175
 170 Val Cys Val Ser Gln Xaa Trp Thr Val Ile Glu Leu Arg Pro Phe Gly
 171 180 185 190
 173 Gly Glu Leu Cys His Ser Xaa Cys Leu Asn Met Ser Glu Val Gly Thr
 174 195 200 205
 176 Glu Thr Phe Pro Ser Pro Ser Ala Gln Leu Ser Pro Asp Ala Ser Leu

RAW SEQUENCE LISTING

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PATENT APPLICATION: US/09/312,596F

TIME: 13:26:37

Input Set : A:\593601.txt

Output Set: N:\CRF4\01042005\I312596F.raw

177	210	215	220
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180 225	230	235	240
182 Ser Arg Val Pro Gly Val Ala Gly Leu Ala Ser Thr Cys Cys Val Cys			
183	245	250	255
185 Leu Glu Ala Glu Arg Leu Lys Gly Cys Leu Asn Ser Glu Lys Ile Cys			
186	260	265	270
188 Ile Ala Pro Ile Leu Ala Cys Leu Leu Ser Leu Cys Leu Cys Ile Ala			
189	275	280	285
191 Gly Leu Lys Trp Val Phe Val Asp Lys Ile Phe Glu Tyr Asp Ser Pro			
192	290	295	300
194 Thr His Leu Asp Pro Gly Arg Ile Gly Gln Asp Pro Arg Ser Thr Val			
195 305	310	315	320
197 Asp Pro Thr Ala Leu Ser Ala Trp Val Pro Ser Glu Val Tyr Ala Ser			
198	325	330	335
200 Pro Phe Pro Ile Pro Ser Leu Glu Ser Lys Ala Glu Val Thr Val Gln			
201	340	345	350
203 Thr Asp Ser Ser Leu Val Pro Ser Arg Pro Phe Leu Gln Pro Ser Leu			
204	355	360	365
206 Tyr Asn Arg Ile Leu Asp Val Gly Leu Trp Ser Ser Ala Thr Pro Ser			
207	370	375	380
209 Leu Ser Pro Ser Ser Leu Glu Pro Thr Thr Ala Ser Gln Ala Gln Ala			
210 385	390	395	400
212 Thr Glu Thr Asn Leu Gln Thr Ala Pro Lys Leu Ser Thr Ser Thr Ser			
213	405	410	415
215 Thr Thr Gly Thr Ser His Leu Thr Lys Cys Asp Ile Lys Gln Lys Ala			
216	420	425	430
218 Phe Cys Val Asn Gly Gly Glu Cys Tyr Met Val Lys Asp Leu Pro Asn			
219	435	440	445
221 Pro Pro Arg Tyr Leu Cys Arg Cys Pro Asn Glu Phe Thr Gly Asp Arg			
222	450	455	460
224 Cys Gln Asn Tyr Val Met Ala Ser Phe Tyr Lys His Leu Gly Ile Glu			
225 465	470	475	480
227 Phe Met Glu Ala Glu Glu Leu Tyr Gln Lys Arg Val Leu Thr Ile Thr			
228	485	490	495
230 Gly Ile Cys Ile Ala Leu Leu Val Val Gly Ile Met Cys Val Val Ala			
231	500	505	510
233 Tyr Cys Lys Thr Lys Lys Gln Arg Lys Lys Leu His Asp Arg Leu Arg			
234	515	520	525
236 Gln Ser Leu Arg Ser Glu Arg Asn Asn Val Met Asn Met Ala Asn Gln			
237	530	535	540
239 Pro His His Pro Asn Pro Pro Pro Asp Asn Val Gln Leu Val Asn Gln			
240 545	550	555	560
242 Tyr Val Ser Lys Asn Ile Ile Ser Ser Glu Arg Val Val Glu Arg Glu			
243	565	570	575
245 Thr Glu Thr Ser Phe Ser Thr Ser His Tyr Thr Ser Thr Thr His His			
246	580	585	590
248 Ser Met Thr Val Thr Gln Thr Pro Ser His Ser Trp Ser Asn Gly His			
249	595	600	605

RAW SEQUENCE LISTING

DATE: 01/04/2005

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TIME: 13:26:37

Input Set : A:\593601.txt

Output Set: N:\CRF4\01042005\I312596F.raw

251	Thr	Glu	Ser	Ile	Leu	Ser	Glu	Ser	His	Ser	Val	Leu	Val	Ser	Ser	Ser
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255	625					630					635					640
257	Asn	Gly	Ile	Gly	Gly	Pro	Arg	Glu	Gly	Asn	Ser	Phe	Leu	Arg	His	Ala
258				645						650					655	
260	Arg	Glu	Thr	Pro	Asp	Ser	Tyr	Arg	Asp	Ser	Pro	His	Ser	Glu	Arg	Tyr
261				660					665					670		
263	Val	Ser	Ala	Met	Thr	Thr	Pro	Ala	Arg	Met	Ser	Pro	Val	Asp	Phe	His
264			675					680					685			
266	Thr	Pro	Thr	Ser	Pro	Lys	Ser	Pro	Pro	Ser	Glu	Met	Ser	Pro	Pro	Val
267		690					695				700					
269	Ser	Ser	Leu	Thr	Ile	Ser	Ile	Pro	Ser	Val	Ala	Val	Ser	Pro	Phe	Met
270	705					710					715					720
272	Asp	Glu	Glu	Arg	Pro	Leu	Leu	Leu	Val	Thr	Pro	Pro	Arg	Leu	Arg	Glu
273				725						730					735	
275	Lys	Tyr	Asp	Asn	His	Leu	Gln	Gln	Phe	Asn	Ser	Phe	His	Asn	Asn	Pro
276				740					745					750		
278	Thr	His	Glu	Ser	Asn	Ser	Leu	Pro	Pro	Ser	Pro	Leu	Arg	Ile	Val	Glu
279			755					760					765			
281	Asp	Glu	Glu	Tyr	Glu	Thr	Thr	Gln	Glu	Tyr	Glu	Pro	Ala	Gln	Glu	Pro
282		770					775					780				
284	Pro	Lys	Lys	Leu	Thr	Asn	Ser	Arg	Arg	Val	Lys	Arg	Thr	Lys	Pro	Asn
285	785					790					795					800
287	Gly	His	Ile	Ser	Ser	Arg	Val	Glu	Val	Asp	Ser	Asp	Thr	Ser	Ser	Gln
288				805						810					815	
290	Ser	Thr	Ser	Ser	Glu	Ser	Glu	Thr	Glu	Asp	Glu	Arg	Ile	Gly	Glu	Asp
291				820					825					830		
293	Thr	Pro	Phe	Leu	Ser	Ile	Gln	Asn	Pro	Met	Ala	Thr	Ser	Leu	Glu	Pro
294			835					840					845			
296	Ala	Ala	Ala	Tyr	Arg	Leu	Ala	Glu	Asn	Arg	Thr	Asn	Pro	Ala	Asn	Arg
297		850					855				860					
299	Phe	Ser	Thr	Pro	Glu	Glu	Leu	Gln	Ala	Arg	Leu	Ser	Ser	Val	Ile	Ala
300	865					870					875					880
302	Asn	Gln	Asp	Pro	Ile	Ala	Val	Xaa	Asp	Ile	Asn	Lys	Thr	His	Arg	Phe
303				885						890					895	
305	Thr	Cys	Lys	Thr	Leu	Phe	Tyr	Ile	Met	Lys	Tyr	Ser	Thr	Phe	Lys	Leu
306				900					905					910		
308	Asn	Asn	Leu	Phe	Tyr	Phe	Ser	Asn	Ser	Ala	Asp	Arg	Lys	Gln	Glu	Trp
309			915					920					925			
311	Lys	Lys	Lys	Leu	Leu	Xaa	Ile	Lys	Tyr	Thr	Tyr	Val	Gln	Met	Cys	Tyr
312		930					935					940				
314	Val	Pro	Tyr	Val	Ala	Ile	Phe	Tyr	Ser	Ile	Ser	Lys	Met	Gly	Lys	Asp
315	945					950					955					960
317	Ile	Asn	Gly	Ala	Phe	Met	Leu	Cys	Tyr	Val	Glu	Ser	Lys	Phe	Cys	Thr
318				965						970					975	
320	Ala	Thr	Met	Ile	Ala	Val	Pro	Xaa	Tyr	Phe	Ala	Lys	Pro	Ser	Ser	Pro
321				980					985					990		
323	Gln	Leu	Phe	Trp	Leu	Phe	Cys	Ala	Leu	His	Tyr	Asn	Asp	Trp	Met	Tyr

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/312,596F

DATE: 01/04/2005
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Input Set : A:\593601.txt
Output Set: N:\CRF4\01042005\I312596F.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 32,42,113,163,182,199,888,934,984,1067

Seq#:4; Xaa Pos. 16,338,347,362,377,383,387,414,423,442

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:5; Line(s) 520

VERIFICATION SUMMARY

DATE: 01/04/2005

PATENT APPLICATION: US/09/312,596F

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Input Set : A:\593601.txt

Output Set: N:\CRF4\01042005\I312596F.raw

L:140 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:16

M:341 Repeated in SeqNo=2

L:426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0

M:341 Repeated in SeqNo=4